

KRAVCHENKO, A.A., kand.med.nauk

Therapeutic use of radioactive phosphorus in osteoplastic surgery;
experimental studies. Ortop.travm. i protez. 20 no.6:79-83 Ja '59.

(MIRA 13:3)

1. Iz Ukrain'skogo nauchno-issledovatel'skogo instituta ortopedii i
travmatologii im. M.I. Sitenko (direktor - chlen-korrespondent AMN
SSSR prof. N.P. Novachenko).

(PHOSPHORUS, radioactive,

eff. on bone regen. after exper. osteoplasty (Rus))

(BONE AND BONES, surg.

exper. osteoplasty, eff. of radiophosphorus on
porop. bone regen. (Rus))

KRAVCHENKO, A.A., kand.med.nauk (Khar'kov, Degtyarnaya ul., 14, kv.48).

Clinical evaluation of osteoplastic operations in the treatment
of recent and unknitted fractures of the long bones. Vest.
khir. 83 no.7:62-69 J1 '59. (MIRA 12:11)

1. Iz Ukrainського nauchno-issledovatel'skogo instituta ortopedii
i travmatologii im. prof.M.I.Sitenko (dir. - prof.N.P.Novachenko).
(BONE GRAFTING)

KRAVCHENKO, A.A., kand.med.nauk

Biological effect of radioactive phosphorus on the osteogenic capacity of an injured osseous organ. Trudy Ukr. nauch.-issl. inst. ortop. i travm. no.15:347-354 '59.

(Mira 16:12)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta ortopedii i travmatologii imeni prof. M.I.Sitenka (dir.-chlen-korrespondent AMN SSSR prof. N.P.Novachenko).

KHAVCHENKO, A. A.

Inhalation effect of the water of Hot Springs, No. 63 on blood pressure in hypertension. Sovet. med. no.8:32-34 Aug. 1950.

(CML 20:1)

1. Of the Clinic for Ear, Throat, and Nose Diseases (Director -- Prof. V. K. Suprunov), Kuban' Medical Institute imeni Krasnaya Armiya.

KRAVCHENKO, A.A., starshiy nauchnyy sotrudnik

Metastases of ovarial tumor simulating thrombosis of the cavernous sinus. Vest.oto-rin. 18 no.5:115-116 S-0 '56. (MLRA 9:11)

1. Iz kliniki bolezney ukha, gorla i nosa Moskovskogo oblastnogo klinicheskogo instituta (dir. - prof. I.Ya. Sendul'skiy)

(OVARIES, neoplasms

metastases to cavernous sinus simulating thrombosis)

(VEINS, CRANIAL SINUSES, neoplasms

metastatic from ovaries in cavernous sinus simulating thrombosis)

(THROMBOSIS, differ. diag.

cavernous sinus thrombosis simulated by metastatic tumor from ovaries)

KRAVCHENKO, A.A., starshiy nauchnyy sotrudnik

Exacerbation of chronic suppurative epitympanitis of the left ear
in Addison's disease. Vest. oto-rin. 19 no.1:99-100 Ja-F '57
(MLRA 10:4)

1. Iz kliniki bolezney ukha, gorla i nosa (dir.-prof. I.Ya.
Sendul'skiy) Moskovskogo oblastnogo nauchno-issledovatel'skogo
klinicheskogo instituta.

(EAR, MIDDLE, diseases,

epitympanitis, exacerbation in Addison's dis.) (Rus)

(ADDISON'S DISEASE, complications,

epitympanitis, exacerbation) (Rus)

KRAVCHENKO, A.A., PLESKOV, K.I.

Use of glutamic acid in the otorhinolaryngological clinic:
Vest.oto-rin. 20 no.6:121 N-D '58 (MIRA 11:12)

1. Iz kliniki bolezney ucha, gorla i nosa (dir. - prof. I.Ya. Sendul'skiy) Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta.
(OTORHINGOLARYNGOLOGY)
(GLUTAMIC ACID)

SVETLAKOV, M.I., dotsent, KRAVCHENKO, A.A., kand.med.nauk, PLESKOV, K.I.

Use of hemopoietic stimulators in radiotherapy for cancer of the
larynx. Vrach.delo no.5:527 My '58 (MIRA 11:7)

1. Klinika bolezney ukha, gorla i nosa (zav. - prof. I.Ya. Sendul'
skiy) Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo
instituta i Tsentral'nogo instituta usovershenstvovaniya vrachey.

(LARYNX--CANCER)

(LEUCOPENIA)

(X RAYS--PHYSIOLOGICAL EFFECT)

SVETLAKOV, M.I., polkovnik med.sluzhby, dots.; KRAVCHENKO, A.A., kand.med.
nauk

Nasal and pharyngeal hemorrhage requiring hospital therapy. Voen.-
med.zhur. no.12:60-62 D '58. (MIRA 12:12)

(EPISTAXIS, ther.

severe, in hosp. (Rus))

(PHARYNX, hemorrh.

ther., in hosp. (Rus))

SVETLAKOV, M.I., dots.; KRAVCHENKO, A.A., kand.med.nauk

Tympanoplasty in chronic suppurative otitis media. Vest.otorin.
20 no.2:20-23 Mr-Ap '58. (MIRA 12:11)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. - prof.I.Ya.
Sendul'skiy) Moskovskogo oblastnogo nauchno-issledovatel'skogo
klinicheskogo instituta i TSentral'nogo instituta usovershen-
stvovaniyu vrachey.

(OTITIS MEDIA, surg.

tympanoplasty in chronic suppurative dis.
(Rus))

SVETLAKOV, M.I.; KRAVCHENKO, A.A.; KARPUKHIN, V.I.

Changes in arterial pressure in patients with laryngeal cancer in operations on the neck under potentiated local anesthesia. Akt. vop. obezbol. no.2:182-194 (59. (MIRA 14:5)

1. Iz kliniki bolezney ukha, gorla i nosa (zaveduyushchiy - prof. I.Ya.Sendul'skiy) Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta i Tsentral'noy klinicheskoy bol'nitsy Ministerstva putey soobshcheyina (nauchnyy rukovoditel' - prof. T.P.Makarenko).

(BLOOD PRESSURE) (LARYNX--CANCER)
(LOCAL ANESTHESIA)

KRAVCHENKO, A.A.; PASTERNAK, A.Ye.; LARCHENKO, R.M.; SOKOLOVA, L.I.

Diseases of the upper respiratory tract and ears in workers
at the Serpukhov textile mills. Gig. i san. 24 no.6:48-51
Ja '59. (MIRA 12:8)

1. Iz Moskovskogo oblastnogo nauchno-issledovatel'skogo kliniche-
skogo instituta imeni Vladimirskogo, Moskovskogo nauchno-issledo-
vatel'skogo instituta sanitarii i gigiyeny imeni F.F.Erismana
i ob"yedinennoy bol'nitsy imeni Semashko Serpukhova.

(OCCUPATIONAL DISEASES

ear & upper resp. tract dis. in textile workers (Rus))

(EAR, dis.

occup., in textile workers (Rus))

(RESPIRATORY TRACT, dis.

same)

KRAVCHENKO, A.A.; NEVRAJEVA, A.S.

Autonomic labyrinthine reactions in patients with hypertension treated by inhalation of artificial hydrogen sulfide water (outside of a health resort). Terap.arkh. 31 no.10:33-37 0 '59.

(MIRA 13:3)

1. Iz Tsentral'nogo instituta kurortologii (direktor G.N. Pospelova) i kliniki ushnykh, gorlovykh i nosovykh bolezney (direktor - prof. I.Ya. Sendul'skiy) Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni M.F. Vladimirovskogo.

(MINERAL WATER, ther.)

(HYPERTENSION ther.)

(SULFIDES ther.)

KRAVCHENKO, A. A., Cand Med Sci -- (diss) "Accelerated method of determination of immunity of anti-rabies vaccines." Odessa, 1960. 11 pp; (Odessa State Medical Inst im N. I. Pirogov); 300 copies; price not given; (KL, 27-60, 160)

KRAVCHENKO, A.A. (Moskva); PASTERNAK, A.Ye. (Moskva); NARYSHKINA, T.F.
(Moskva); VOL'FSON, M.T. (Moskva)

Occupational pathology of the otolaryngological organs in workers of
cotton mills. Gig. truda i prof. zab. 4 no.6:41-43 Je '60.

(MIRA 15:4)

1. Moskovskiy oblastnoy klinicheskiy institut imeni M.F.Vladimirovskogo,
Institut sanitarii i gigiyeny imeni F.F.Erismana i Bol'nitsa fabriki
"Krasnyy tekstil'shchik".

(COTTON MANUFACTURE--HYGIENIC ASPECTS) (OTOLARYNGOLOGY)

KRAVCHENKO, A.A.; NEVRAYEVA, A.S.

Influence of inhalations of artificial hydrogen sulfide water
on the oscillographic indexes of hypertension patients. Vrach.
delo no.7:117-119 J1 '60. (MIRA 13:7)

1. Tsentral'nyy institut kurortologii i klinika ushaykh, gorlovykh
i nosovykh bolezney Moskovskogo oblastnogo nauchno-issledovatel'-
skogo klinicheskogo instituta.
(HYDROGEN SULFIDE) (HYPERTENSION)

KRAVCHENKO, A.A.; GORBACHEVA, K.M.; BOGOMOLOVA, Ye.R.; BITSADZE, L.R.

Change in the auditory function of the ear in treating hypertension
with some medicinal substances (preliminary report). Vop. klin.
pat. no.3:78-88 '61. (MIRA 14:12)

1. Iz Kliniki bolezhey ukh., gorla i nosa (zaveduyushchiy zasluzhennyy
deyatel' nauki prof. I.Ya.Sandul'skiy) Moskovskogo oblastnogo nauchno-
issledovatel'skogo instituta imeni M.V.Vladimirskogo.
(HYPERTENSION) (HEARING)

KRAVCHENKO, A.A.; BOGOMOLOVA, Ye.R.; PLESKOV, K.I.; YUDIN, Yu.O.

Problem of clinical and morphological changes of the upper respiratory tract and ear in leukoses. Vest. otorin. 22 no. 4:33-38 Je-Ag '60.
(MIRA 13:12)

(RESPIRATORY ORGANS) (EAR) (LEUKEMIA)

KRAVCHENKO, A.A.; BRYUKHANOVA, V.I.

Retropharyngeal abscess complicated by a cerebellar abscess.
Vest. otorin. 22 no.4:98-99 Je-Ag '60. (MIRA 13:12)
(PHARYNX—ABSCESS) (CEREBELLUM—ABSCESS)

KRAVCHENKO, A.A. (Moskva)

Influence of the inhalation of Psekups mineral waters on arterial
pressure. Vop. kur., fizioter. i lech. fiz. kul't. 25 no.4:309-314
Jl-Ag '60. (MIRA 13:9)

(BLOOD PRESSURE)

(MINERAL WATERS, SULPHUROUS)

KRAVCHENKO, A.A.; NEVRAYEVA, A.S.

Condition of the auditory analyzer in hypertension patients
treated with vapor inhalations from hydrogen sulfide water.
Vop. kur., fizioter. i lech. fiz. kul't. 26 no.5:420-426 S-0
'61. (MIR 14:11)

1. Iz Tsentral'nogo instituta kurortologii (dir. G.N.Pospelova)
i kliniki ushnykh, gorlovykh i nosovykh bolezney (dir. - prof.
I.Ya. Sendul'skiy), Moskovskogo oblastnogo klinicheskogo instituta
(dir. P.M.Leonenko, rukovoditel' raboty-prof. Z.Ye.Bykhovskiy).
(HYPERTENSION) (MINERAL WATERS, SULFUROUS)
(ACOUSTIC NERVE)

KRAVCHENKO, A.A., starshiy nauchnyy sotrudnik; MIRONOV, B.I.;
BALASHOV, V.I.

Vestibulometry and oxymetry in hypertensives. Trudy
MONIKI np.5:115-131 '62; (MIRA 16:4)

1. Otorinolaringologicheskaya klinika Moskovskogo oblastnogo
nauchno-issledovatel'skogo klinicheskogo instituta (direktor -
zasluzhennyy deyatel' nauki, prof. I.Ya.Sendul'skiy).
(HYPERTENSION) (VESTIBULAR APPARATUS)
(BLOOD—OXYGEN CONTENT)

KRAVCHENKO, A.A., starshiy nauchnyy sotrudnik

Some data concerning the effect of sulfide mineral water on the
brain blood vessels and the pressure of the cerebrospinal fluid.
Trudy MDNIKI no.5:142-159 '62. (MIRA 16:4)

1. Otorinolaringologicheskaya klinika Moskovskogo oblastnogo
nauchno-issledovatel'skogo klinicheskogo instituta imeni
Vladimirovskogo (dir. - zasluzhennyy deyatel' nauki, prof. I.Ya.
Sendul'skiy) i laboratoriya eksperimental'noy patofiziologii
mozga Instituta nevrologii AMN SSSR (zav. - chlen-korrespondent
AMN SSSR B.N.Klosovskiy).

(MINERAL WATER, SULFUROUS) (BRAIN--BLOOD SUPPLY)
(CEREBROSPINAL FLUID)

KRAVCHENKO, A.A., starshiy nauchnyy sotrudnik

Late results of treatment of hypertension patients with auditory and vestibular disorders by means of sulfide water inhalations. Trudy ~~MUNIKI~~ no.5:160-176 '62. (MIRA 16:4)

1. Klinika ushnykh, gorlovykh i nosovykh bolezney Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni Vladimirskego (dir. - zasluzhennyy deyatel' nauki, prof. I.Ya.Sendul'skiy).

(HYPERTENSION) (EAR--DISEASES) (INHALATION THERAPY)

KRAVCHENKO, A.A., starshiy nauchnyy sotrudnik

State of the auditory analyser in hypertension patients treated
by inhalation of natural sulfide water. Trudy MONIKI no.5:177-
206 '62. (MIRA 1614)

1. Klinika ushnykh, gorlovykh i nosovykh bolezney Moskovskogo
oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta
imeni Vladimirovskogo (dir. - zasluzhennyy deyatel' nauki, prof.
I.Ya.Sendul'skiy).
(HYPERTENSION) (EAR-DISEASES) (INHALATION THERAPY)

KRAVCHENKO, A.A.; BOGOMOLOVA, Ye.R.; PLESKOV, K.I.; YUDIN, Yu.G.

Clinical and morphological changes in the ear, nose and
throat in reticulosis with a tumorlike growth. Vop. klin.
pat. no.2:244-251 '61 (MIRA 16:12)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. - zaslužennyy deyatel' nauki prof. I.Ya. Sendul'skiy) i patomorfologicheskogo otdela (zav. - prof. S.B.Vaynberg [deceased]) Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni Vladimirovskogo.

ARUTYUNOV, V.Ya., prof.; KRAVCHENKO, A.A., doktor med. nauk; ODINKOVA, V.A.,
kand. med. nauk

Wegener's syndrome. Vest. dermat. i ven. 37 no.5:30-35 My '63.
(MIRA 17:5)

1. Klinika kozhnykh i venericheskikh bolezney (dir. - prof. V.Ya. Arutyunov) otolaringologicheskaya klinika (dir. - zaslužennyy deyatel' nauki prof. I.Ya. Sendul'skiy) i patomorfologicheskii otdel (zav. - chlen-korrespondent AMN SSSR prof. I.P. Avtsyn) Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo Instituta imeni M.F. Vladimirovskogo (dir. - zaslužennyy vrach P.M. Leonenko).

DOROFEYEV, V.G.; KITOV, A.N.; KRAVCHENKO, A.A., inzh., retsenzent;
BRAYLOVSKIY, N.G., inzh., red.; KHITROVA, N.A., tekhn.red.

[Servicing of passenger cars] Ekipirovka passazhirskikh
vagonov. Moskva, Izd-vo "Transport," 1964. 135 p.
(MIRA 17:3)

L 12021-65 EWT(1)/ESC(b)-2/EAD-2 IJP(c)/AS(wp)-2/AFTC(b)/SSD/AFWL/ASD(a)-5/
RAEN(c)/ESD(t)
ACCESSION NR: AP4046115 S/0302/64/000/003/0062/0064

AUTHOR: Kravchenko, A. A. B

TITLE: Instrument for determining local values of magnetic field strength along the symmetry axis of magnetostatic lenses of an electron microscope 7

SOURCE: Avtomatika i priborostroyeniye, no. 3, 1964, 62-64

TOPIC TAGS: electron microscope, magnetic field strength, magnetic field, magnetostatic lens

ABSTRACT: The instrument consists of a Hall-generator-type sensor made from a Ge single crystal, a microammeter, and auxiliary switches and resistors. The sensor can be placed by a micrometer screw to any position on the magnetic lens axis. The instrument characteristics are: ranges, 0-100, 0-500, 0-1,000, 0-5,000, 0-10,000, 0-15,000 ga; basic error, $\pm 2\%$; sensitivity, 40 micro-volt/oer; sensor size, $2.5 \times 2.5 \times 0.3$ mm. Orig. art. has: 2 figures and 1 table.

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L 12021-65

ACCESSION NR: AP4046115

ASSOCIATION: Sumskiy zavod elektronnykh mikroskopov (Sumy* Factory of
Electron Microscopes)

SUBMITTED: 00

ENCL: 00

SUB CODE: EC

NO REF SOV: 000

OTHER: 000

Card 2/2

OVECHKIS, YE. S., KHAYCHENKO, A. D., GRAD, N. YE. IRLINSKIY, D. A.,
TSIFENYUK, A. YA.

Hides and Skins

Efficient method for measuring stiff hides. Leg. prom. 12 no. 8, 1952.

Monthly list of Russian Accessions. Library of Congress, October 1952. UNCLASSIFIED.

KRAVCHENKO, A.D., inzh.

Semiautomatic machines for shaping and assembling shoes having
sewed and glued soles. Izv. vys. ucheb.zav.; tekhn.leg. prom.
no.1:57-66 '58. (MIRA 11:6)

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy
promyshlennosti.
(Shoe machinery)

KRAVCHENKO, A.D., inzh.

Using the method of two-dimensional stretching in investigating
physical and mechanical properties of chrome-tanned calf leather.
Izv.vys.ucheb.zav.; tekhn.prom. no.4:45-58 '58. (MIRA 11:12)

1.Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-
obuvnoy promyshlennosti.
(Leather--Testing)

KRAVCHENKO, A.D., inzh.

Investigating physicommechanical properties of chrome-tanned calfskin
by two-dimensional stretching. Izv.vys.ucheb.zav.; tekhn.prom.
no.5:35-46 '58. (MIRA 12:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy
promyshlennosti.

(Leather--Testing)

KRAVCHENKO, A.D., inzh.; Prinimala uchastiye: ROKHLENKO, R.

Studying the effect of moisture on the deformation of shoe upper materials in cases of two-dimensional stretching. Izv.vys.ucheb. zav.; tekhn.prom. no.6:84-91 '61. (MIRA 14:12)

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy promyshlennosti. Rekomendovana kafedroy tekhnologii obuvnogo proizvodstva Kiyevskogo tekhnologicheskogo instituta legkoy promyshlennosti.

(Shoe manufacture)
(Strains and stresses)

KRAVCHENKO, A.D., inzh.

Investigating the deformation of shoe uppers and their fastening
to the sole parts on a semiautomatic multiple-operation line for
the forming and assembly of welt footwear. Nauch.-issl.trudy Ukr
NIIP no.13:117-131 '62. (MIRA 18:2)

24.7700

26028

S/.39/61/000/003/008/013
EG36/E335

26.2421

AUTHOR: Kravchenko, A.F.

TITLE: Some Electrophysical Properties of Gallium
Arsenide

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
Fizika, 1961, No. 3, pp. 80-87

TEXT: An account is given of the investigation of the temperature dependence of the electrical conductivity, thermo-electric e.m.f. and the Fermi level in gallium arsenide of both conductivity types. The effective masses and concentrations of electrons and holes and the variation of the Hall coefficient with both temperature and magnetic field were determined and thus also the temperature dependence of the mobility. These experimental results are compared with theoretical calculations and some comments are made on the carrier scattering mechanism. The author states that insufficient work of this sort has been carried out to make possible some conclusions on the energy structure or conduction mechanism of gallium arsenide. Rectangular parallelopiped
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X

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Some Electrophysical Properties ... EO36/E335

samples were cut from polycrystalline ingots, the surface was then ground and the surface layer, which was deformed by cutting and grinding, removed by etching. Then, narrow strips of silver were deposited on the sides of the samples and tungsten probes pressed onto these for the Hall measurements and for the conductivity determination by a compensation method. Direct current was used for the Hall measurements. The usual compensation technique was used to measure the thermo-electric e.m.f. to an accuracy of $\pm 1 \mu\text{V}$. The temperature difference along the sample of $10 - 15^\circ\text{C}$ was measured with two copper-constantan thermocouples. The differential thermo-e.m.f. was measured with respect to the copper branch of the thermocouple. In some cases the samples cut comprised a single crystal and no significant difference was observed between these samples and those containing two or three crystals. The measured thermo-electrical e.m.f. are of the order $0.03 - 0.05 \text{ mV/deg}$ for n-type and $0.1 - 0.2 \text{ mV/deg}$ for p-type material at room temperature. These values increase for both types with increasing temperature. Measurements are plotted over the range 300°K to approximately 600°K . The conductivity of n-type material increases slowly

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Some Electrophysical Properties... EO36/E335

with temperature to reach a maximum at 423 °K and then decreases. At about 473 °K the conductivity again sharply increases. In some n-type samples the conductivity is almost independent of temperature up to 473 °K and then slowly increases. The conductivity of p-type material increases from room temperature somewhat more rapidly than that of n-type. The Hall constant of n-type is independent of temperature from low temperatures up to ~200 °K. A slight decrease of the Hall constant is observed for p-type material over this range. This change is stated to be less than that reported by Folberth and Weiss (Ref. 4 - Z. Naturforsch. 10a, 615, 1955). Over this range the conductivity of both n- and p-type samples increased. The variation of the Hall constant with the magnetic field was measured at room temperature. For n-type samples a slight linear decrease with the field was observed. The decrease was smaller for the larger carrier concentrations and in one case was independent of the field over the range 80 to 20 000 Oe. The Hall constant of p-type samples drops sharply as the field is increased from 80 to 4 000 Oe. From 6 000 Oe it is practically constant. After this investigation all Hall

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Some Electrophysical Properties. E036/E335

measurements were carried out above 6 000 Oe. The temperature dependence of the carrier mobility calculated from these Hall and conductivity measurements showed an increase from room temperature to a maximum at 400 - 420 °K for n-type and at about 500 °K for p-type. The typical mobilities were about 200 - 300 cm²/Vsec and 1 400 - 1 600 cm²/Vsec for p- and n-type samples, respectively. The author states that measurements of the Nernst-Ettingshausen effect on these samples indicated that at lower temperatures scattering by impurities was dominant. This work is to be discussed in a separate paper. The decrease of mobility at the higher temperature and the slight dependence of the Hall constant on temperature suggests that the samples are degenerate. Variations of the Hall constant of Ge and InSb with magnetic field similar to those reported here have been explained by the presence of light and heavy holes and this may be the explanation in the case of gallium arsenide. The position of the Fermi level is calculated from the thermo-electric e.m.f. and supports the conclusions that the samples are degenerate.

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Some Electrophysical Properties ...

E036/E335

The carrier concentrations at room temperatures are calculated from Hall data to be

$\sim 4.5 \times 10^{17} \text{ cm}^{-3}$ for n-type and $\sim 7.8 \times 10^{17} \text{ cm}^{-3}$ for p-type and the variation with temperature tallies with the degeneracy. The effective masses calculated from the data are $0.024 m_0$ for electrons and $0.093 m_0$ for holes, where m_0

is the free electron mass. The observed thermo-electric e.m.f.'s are somewhat less than those calculated on the basis of one carrier type and may be due to the presence of carriers of both signs. Summarising, the increasing n-type conductivity is consistent with impurity scattering, whilst with p-type the number of carriers also increases. The decrease in mobility at higher temperatures is due to thermal scattering. The fact that the maximum conductivity is observed at a higher temperature in p-type than in n-type is explained by the higher carrier concentration in p-type samples. The abrupt increase of n-type conductivity at high temperature could be due to deep impurity levels. The author expresses his gratitude to

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S/139/61/000/003/008/013

Some Electrophysical Properties ...

E036/E335

V.A. Presnov for the samples and to A.F. Gorodetskiy for interest in the work. There are 9 figures and 13 references: 6 Soviet and 7 non-Soviet. The four English-language references quoted are: Ref. 2 - H. Welker - J. Electronics, 1, 181, 1955; Ref. 3 - R. Barrie, F. Connell, J. Edmond, J. Ross - Physica, 20, 11, 1087-1090, 1954; Ref. 11 - R. Willardson, T. Harman, A. Beer - Phys. Rev., 96, 1512, 1954; Ref. 12 - J. Tauc - Phys. Rev., 95, 1394, 1954.

ASSOCIATION: Novosibirskiy elektrotekhnicheskiy institut
(Novosibirsk Electrotechnical Institute)

SUBMITTED: May 9, 1960 (initially)
November 26, 1960 (after revision)

Card 6/6

KRAVCHENKO, A.F.; FEN, G.Yu.

Galvanomagnetic and thermomagnetic phenomena in n-type GaAs.
Fiz. tver. tela ~~4~~ no.2:660-666 F '63. (MIRA 16:5)

1. Novosibirskiy elektrotekhnicheskiy institut.
(Thermomagnetism) (Thermoelectricity) (Gallium arsenide)

L 35490-65 EWT(1)/EWT(m)/EWP(w)/EWA(d)/T/EWP(+)/EWP(b)/EWA(h) Pz-6/Peb.
 ACCESSION NR: AP5007839 E(c) JD/AT S/0288/64/000/003/0091/0095

AUTHOR: Kravchenko, A.F.; Kot, K.N.; Divak, M.I.

TITLE: Microhardness of gallium arsenide

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya tekhnicheskikh nauk, no. 3, 1964, 91-95

TOPIC TAGS: gallium arsenide, gallium arsenide hardness, single crystal hardness, microscope hardness, semiconductor hardness, semiconductor crystal structure

ABSTRACT: Only a few papers deal with the microstructure of GaAs (see e.g., G.A. Wolff, L. Toman, F.I. Field, J.C. Clavk, Semiconductors and Phosphors, New Jersey, 1958 for polycrystalline samples). The present paper reports on measurements of the microhardness of oriented monocrystals having a free electron concentration of $n \sim 10^{17} \text{ cm}^{-3}$, and a dislocation density in the $\{111\}$ plane between $2 \cdot 10^4$ and $5 \cdot 10^5 \text{ cm}^{-2}$. Samples were polished by etching (1 part HF, 3 parts HNO_3 , and 2 parts H_2O). The microhardness in the $\{111\}$ plane is $H = 850 \text{ kg/mm}^2$; in $\{110\}$ - 510 kg/mm^2 . Annealing at temperatures not higher than 400°C increases the microhardness, which also depends on the orientation of the indenter with respect to the crystallographic directions

Card 1/2

L 35490-65
ACCESSION NR: AP6007839

and is determined by the distribution and mobility of dislocations. There is a proportionality between the microhardness and the heat of formation of Al_3B_2V . The viscosity of the samples with in the {111} plane is equal to $3.4 \cdot 10^{-3}$ g·cm. Orig. art. has: 2 formulas, 5 figures, and 1 table.

ASSOCIATION: Institut fiziki tverdogo tela i poluprovodnikovoy elektroniki, (Institute for Solid State Physics and Semiconductor Electronics)

SUBMITTED: 10Jan64

ENCL: 00

SUB CODE: SS, EC

NO REF SOV: 004

OTHER: 003

Card 2/2)

L 11967-65 ENT(1)/EPA(s)-2/ENT(m)/ENP(t)/ENP(b) Pt-10 IJP(c)/APWL/SSD/
 AS(mp)-2/ASD(a)-5/RAEM(a)/ESD(gt)/ESD(t) JD
 S/0139/64/000/005/0062/0068
 ACCESSION NR: AP4047349

AUTHOR: Kravchenko, A. F.

TITLE: Magnetoresistance in n-type gallium arsenide

SOURCE: IVUZ. Fizika, no. 5, 1964, 62-63

TOPIC TAGS: gallium arsenide, magnetoresistance, galvanomagnetic effect, conduction band, carrier density, Hall effect

ABSTRACT: The purpose of this investigation was to study further the structure of the conduction band in n-type GaAs and to obtain additional information concerning the location and form of the additional minima of the conduction band (in excess of those in germanium). The tests were made over a wide interval of temperatures and concentrations, and in different crystallographic directions. The samples were in the form of right parallelepipeds 0.1 x 0.3 x 1.0 cm. Much attention was paid to the surface finish and to the quality

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L 11967-65

ACCESSION NR: AP4047349

of the current contacts. The temperature range was 4.2--300K, and the free-carrier density, calculated from the Hall effect, was 10^4 cm^{-3} -- 10^{18} cm^{-3} at room temperature. The results have shown that the constant-energy surface is anisotropic in K-space for samples with carrier density $\leq 10^7 \text{ cm}^{-3}$. There is practically no anisotropy when the impurity content is high. The coefficients of the magneto-resistance tensor were calculated for samples with different impurity concentration and different temperatures. The relation between these coefficients shows that the conduction of these samples lies in the lowest conduction band which has many minima distributed along the [100] axis. In these minima, the equal-energy surfaces are ellipsoids of revolution with major axes along the [100] direction. The anisotropy exponent of the minima on [100] is close to the analogous minima for silicon. At liquid helium temperature, a negative magneto-resistance is observed for samples with density $n \sim 10^{17} \text{ cm}^{-3}$; this magnetoresistance is isotropic. Several hypotheses are advanced concerning the structure of the conduction bands of GaAs.

Card 2/3

L 11967-65

ACCESSION NR: AP4047349

2
"In conclusion, the author thanks Professor H. Y. Fan for help with the work." Orig. art. has: 4 figures, 8 formulas, and 2 tables.

ASSOCIATION: Novosibirskiy elektrotekhnicheskiy institut (Novo-sibirsk Electrotechnical Institute)

SUBMITTED: 04May63

ENCL: 00

SUB CODE: SS, IC

NR REF SOV: 003

OTHER: 021

Card 3/3

KRAVCHENKO, A.P.; MOSHKIN, L.N.

Unit for measuring the lifetime of minority charge carriers in
semiconductors. Zav. lab. 31 no.1: 26-127 '65.

(MIRA 18:3)

1. Novosibirskiy elektrotekhnicheskii institut.

XXXXXXXXXX, I.I.; XXXXXX, I.I.; XXXXXX, I.I.

Longitudinal data set: In order to obtain a set of data for the year 1971
no. 5/10/1971 0 10% (PURA 18:70)

1. Institutinski individualni podatki su dostupni u SSOR.
2. (C) - korrespondent IN 10/10 (10/10/10).

L 2551-66 EWT(m)/EWP(w)/EPF(c)/EWP(j)/T/EWP(t)/EWP(b) IJP(c) JD/RM

ACCESSION NR: AP5021083

UR/0288/65/000/002/0153/0154

537.311.33

AUTHOR: Kornilovich, A. A.; Kravchenko, A. F.

TITLE: Effect of heat treatment on the electrical properties of silicon containing phosphorus as an impurity

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya tekhnicheskikh nauk, no. 2, 1965, 153-154

TOPIC TAGS: high temperature annealing, low temperature annealing, Hall effect, silicon, phosphorus impurity, free electron mobility, donor concentration, electrical resistance, electroneutral silicon dioxide

ABSTRACT: Heating of Si to temperatures above 350C markedly changes its electrical properties; the reason for this is not conclusively known, although certain theories on the interaction of oxygen with atoms of silicon and atoms of impurities have been advanced. In this connection, the authors present the results of an experimental investigation of electrical resistance, concentration, and free electron mobility as a function of the time and temperature of the heat treatment (annealing) of three groups of n-Si containing different amounts of P impurity. The annealing was performed in a vacuum (10^{-3} mm Hg) at from 400 to 1100C for 30 min to 40 hr, and the cooling, for 10 hr, inside the furnace. The effect of annealing differed

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L 2551-66

ACCESSION NR: AP5021083

depending on the temperature range in which it was performed: above 800C the Hall coefficient and free-electron mobility tended to increase (most sharply in the material with the lowest content of P), while electrical resistance remained constant; below 800C (low-temperature annealing) the Hall coefficient and the electrical resistance of Si decreased while electron mobility somewhat increased. Annealing beyond 30 min no longer affected the electrical characteristics and parameters of Si. The differences in the effect of heat treatment on electrical properties are conditioned by the presence of oxygen in silicon in the form of monodisperse Si_2O groups. In the process of the heating of Si to 1000C the oxygen atoms become regrouped



The electrically neutral groups of SiO_2 interact with the phosphorus



The resulting oxides of the impurity react with SiO_2



As a result, the P and O atoms are bound into electrically neutral $\text{P}_x\text{Si}_y\text{O}_2$ groups and the

Card 2/3

L 2551-66

ACCESSION NR: AP5021083

2

donor concentration decreases. On heating to 1300C the molecules of phosphorus-silica glasses, the oxides of the impurity, and the silicon dioxides decay, and the liberated oxygen diffuses through the interstices and, following rapid cooling of the crystal, is distributed in the form of Si_2O groups. By contrast, low-temperature treatment leads to the formation of electrically active SiO_4 complexes from Si_2O groups. These complexes may be singly or multiply ionized, thus leading to an increase in free-electron concentration. The increase in electron mobility is clearly attributable to the decrease in the number of thermal defects in the process of prolonged annealing. Orig. art. has: 3 figures. [16]

ASSOCIATION: Institut fiziki poluprovodnikov Sibirskogo otdeleniya AN SSSR, Novosibirsk (Institute of Semiconductor Physics, Siberian Department, AN SSSR)

SUBMITTED: 08Oct64

ENCL: 00

SUB CODE: MM, EM

NO REF SOV: 000

OTHER: 009

ATD PRESS: 4109

Card 3/3

L 14562-66 EWT(m)/EWP(w)/T/EWP(t)/EWP(b) IJP(o) JD

ACC NR: AP6002015

SOURCE CODE: UR/0288/65/000/003/0079/0085

AUTHOR: Kravchenko, A. F.; Kornilovich, A. A.; Saks, L. A.; Sirotkina, V. P.

ORG: Institute of Semiconductor Physics, Siberian Branch, AN SSSR, Novosibirsk (Institut fiziki poluprovodnikov Sibirskogo otdeleniya AN SSSR)

TITLE: Electrical properties of silicon with phosphorus admixtures

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya tekhnicheskikh nauk, no. 3, 1965, 79-85

TOPIC TAGS: silicon semiconductor, specific resistance, Hall effect, thermoelectromotive force, phonon scattering

ABSTRACT: The majority of earlier works concerning the influence of phosphorus on the physical properties of silicon were carried out on polycrystalline materials in which the intercrystalline potential barriers made the interpretation of kinetic effects extremely complicated. In view of the present-day uses of n-type silicon with low P content, the authors investigated effects in three types of Si samples (Si-1, Si-2, Si-3) with differing P concentration having at room temperature specific resistivities of 18, 9, and 6 ohm·cm. Experimental results are summarized in Figures 1 through 4. A detailed theoretical interpretation of the experimental results is also given. The theoretical dashed curves in Fig. 4 are in good agreement with experimental data except in the low temperature region, where the deviation may be due to admixture scattering which was neglected during the theoretical derivation.

UDC: 539.293:538.632

539.295:537

Card 1/4

L 14562-66

ACC NR: AP6002015

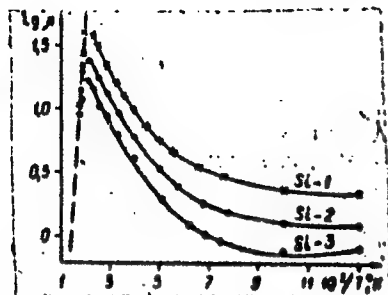


Fig. 1 Temperature dependence of n-type, P admixture silicon resistivity.

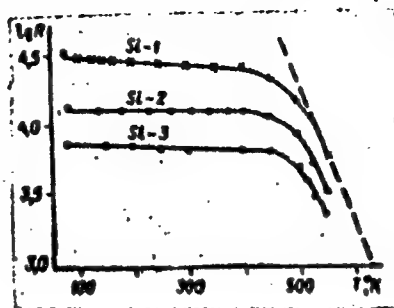


Fig. 2 Temperature dependence of the Hall constant of n-type, P admixture silicon

Card 2/4

L 14562-66

ACC NR: AP8002015

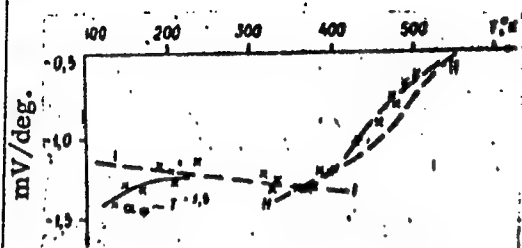


Fig. 3 Temperature dependence of the thermal emf of n-type, P admixture silicon

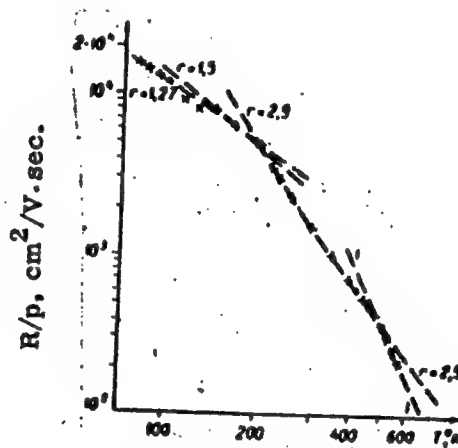


Fig. 4 Hall mobility as a function of temperature

Curve II in Fig. 3 is somewhat below the experimental points probably because of a too coarse estimate of the role of inter-valley scattering. The increase in the absolute value of the

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L 14562-66

ACC NR: AP6002015

thermal emf at low temperatures is apparently due mainly to the effect of phonon enhancement. (The experimental data concerning the thermal emf agree well, within the admixture scattering inaccuracy, with the theoretical expression for the phonon thermal emf $\alpha_{ph} \sim T^{-3.5}$.) Orig. art. has: 16 formulas and 4 figures.

[08]

SUB CODE: 11, 20 / SUBM DATE: 27Aug64 / OTH REF: 006 / ATD PRESS: 4190

OC

Card 4/4

REF ID: A6615
ACC NO: A6615

SOURCE CODE: UR/0139/66/000/003/0074/0075

AUTHOR: Kravchenko, A. P.

ORG: Institute of Physics of Semiconductors, SO AN SSSR (Institut fiziki poluprovodnikov SO AN SSSR)

TITLE: Galvanomagnetic and thermomagnetic phenomena in compensated gallium arsenide

SOURCE: IVUZ. Fizika, no. 3, 1966, 74-79

TOPIC TAGS: gallium arsenide, galvanomagnetic effect, thermomagnetic effect, Hall effect, magnetoresistance, Nernst effect, Ettingshausen effect, electron density, electron mobility, electron scattering

ABSTRACT: The author measured, in a wide range of temperatures, several kinetic characteristics of gallium arsenide (Hall effect, magnetoresistance, Nernst-Ettingshausen effect) in which the free-electron density at room temperature did not exceed 10^{15} cm^{-3} . The purpose of the investigation was to determine the dominating mechanism of scattering and to explain the previously observed disparity between the electron mobility and the electron density. Standard procedures were used for the measurements. The results show that at low temperatures the electrons are scattered predominantly from the impurity atoms and from the optical vibrations, while at high temperatures the scattering is by acoustic phonons. In the presence of simultaneous scattering by thermal vibrations and by impurity ions, the principal role in the longitudinal Nernst-Ettingshausen effect at $T > 300\text{K}$ is played by the scattering by acoustic phonons.

Card 1/2

L 09359-67

ACC NR: AT6023415

Whereas the transverse Kernst-Ettingshausen effect reverses sign near 285K, the longitudinal one does not. The mobility calculated from the dependence of the magneto-resistance on the magnetic field intensity does not agree with the value of the mobility measured from the Hall effect. The discrepancy is attributed to a possible anisotropy of the scattering. Orig. art. has: 3 figures and 4 formulas.

SUB CODE: 20/ SUBM. DATE: 31Aug64/ ORIG REF: 006/ OTH REF: 014

L 38890-66 EWT(1) IJP(c)

ACC NR: AP6018557

SOURCE CODE: UR/0181/66/008/006/1899/1902

AUTHOR: Kravchenko, A. F.; Sardaryan, V. S.; Magarill, L. I.

ORG: Institute of Physics of Semiconductors, SO AN SSSR, Novosibirsk (Institut fiziki poluprovodnikov SO AN SSSR)

TITLE: On the phenomenological theory of the longitudinal Hall effect

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1899-1902

TOPIC TAGS: Hall effect, cubic crystal, semiconductor conductivity

ABSTRACT: A phenomenological theory is developed for the longitudinal Hall effect in cubic crystals in the case of anisotropic relaxation time and two-band conductivity, and anisotropic dispersion. Expressions are derived for the different components of the conductivity corresponding to both spherical and anisotropic minima, neglecting intervalley transitions. Formulas are then presented for the coefficients of the generalized conductivity tensor in terms of experimentally measured quantities. In the latter case expressions are given for both the longitudinal and planar Hall effects. The results show that the longitudinal Hall field does not act on the spherical minimum, whereas the planar and ordinary Hall fields are expressed in terms of kinetic parameters of both bands, and that experimental investigation of the longitudinal Hall effect yields important information on the anisotropy of the additional minima. The authors thank V. L. Pokrovskiy for valuable remarks. Orig. art. has: 23 formulas.

SUB CODE: 20/ SUBM DATE: 02Aug65/ ORIG REF: 004/ OTH REF: 004

Card 1/1/114

L 38874-66
ACC NR:

NR: EWT(1)/EWT(m)/EWT(t)/ETI IJF(c) AT/JD/JG
 18018566 SOURCE CODE: UR/0181/66/008/006/1936/1938
 63
 59
 2/
 8
 AUTHOR: Kravchenko, A. F.; Sardaryan, V. S.
 ORG: Institute of Physics of Semiconductors, SO AN SSSR, Novosibirsk (Institut fiziki
 poluprovodnikov SO AN SSSR)
 TITLE: Contribution to the theory of the energy spectrum of the electrons of doped
 semiconductors
 SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1936-1938
 TOPIC TAGS: semiconductor theory, electron spectrum, semiconductor conductivity,
 conduction band, semiconductor band structure
 ABSTRACT: In view of the fact that earlier studies of the influence of impurities on
 the energy spectrum of electrons in strongly doped semiconductors lead to various
 integral expressions for the state density and for the distribution "tails," which
 are difficult to use for quantitative estimates of the optical and kinetic char-
 acteristics of the semiconductors, the authors have obtained by the statistical
 Thomas-Fermi method an analytic form for the state density for three regions of ener-
 gy of practical interest: a) $E \ll E_0$, b) $E \approx E_0$, and c) $E \gg E_0$ (E - energy, E_0 -
 bottom of band of impurity-free semiconductor). An analytic expression is readily
 obtained by using an integral representation of the delta function, by assuming the
 volume to be large ($V \rightarrow \infty$), and by choosing a potential that tends to zero quite
 rapidly. The results show that the density of states deep in the conduction band is

L 06230-67 EWT(1)/EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) JD/JG
 ACC NR: AP6029535 SOURCE CODE: UR/0046/66/012/003/0369/0372

AUTHOR: Bobylev, B. A.; Kravchenko, A. F.

ORG: Institute of the Physics of Semiconductors, SO AN SSSR, Novosibirsk (Institut fiziki poluprovodnikov, SO AN SSSR)

TITLE: Absorption of ultrasonic waves in junctions of GaAs and GaSb

SOURCE: Akusticheskiy zhurnal, v. 12, no. 3, 1966, 369-372

TOPIC TAGS: ultrasonic wave, phonon interaction, ultrasound absorption

ABSTRACT: This paper presents experimental measurements of the damping of ultrasonic waves in semiconductor junctions of GaAs and GaSb. The frequency dependence of this absorption is examined in the range 20-200 megacycles; the temperature dependence is observed over the interval $T = 95^{\circ}\text{K}$ to $T = 300^{\circ}\text{K}$. The measurements were made using the "pulse technique" in which radiofrequency pulses, each lasting a few microseconds, generate sound waves which reflect back and forth between the parallel faces of a crystal specimen of the metal being studied. As the sound wave travels through the metal, it is gradually damped as a result of (at least) four distinct processes: 1) ordinary damping of longitudinal waves as they pass through an isotropic medium; 2) absorption due to the interaction of elastic waves with dislocations in the crystal structure; 3) thermoelastic absorption; and 4) absorption due to the interactions between phonons and electrons. The samples of GaAs and GaSb were oriented in the direc-

UDC: 534.286

Card 1/2

L 06230-67

ACC NR: AP6029535

tions $\langle 111 \rangle$, $\langle 110 \rangle$, and $\langle 112 \rangle$, and both longitudinal and transverse waves were introduced. The damping of the sound waves was found to be almost independent of temperature, over the range of temperatures considered. However, the damping appears to be strongly frequency-dependent. The absorption coefficient α depends on the frequency f as follows: $\alpha \sim f^n$. The exponent n , measured experimentally, was found to take values between 1.5 and 2.0. Orig. art. has: 4 figures, 1 table, 1 formula.

SUB CODE: 20/

SUBM DATE: 05May65/

ORIG REF: 001/

OTH REF: 007

Card 2/2 *1th*

L 08075-67 ENP(t)/ETI IJP(c) JD/JG

ACC NR: AP6033896

SOURCE CODE: GE/0030/66/017/002/0479/0488

AUTHOR: Kravchenko, A. F. ; Sardaryan, V. S.

ORG: Institute of Semiconductor Physics, Siberian Division, Academy of Sciences
SSSR, Novosibirsk

TITLE: The bottom structure of the conduction band in GaAs

SOURCE: Physica status solidi, v. 17, no. 2, 1966, 479-488

TOPIC TAGS: magnetoresistance, Hall effect, gallium arsenide, semiconductor physics, semiconductor, semiconductor carrier, conduction band, semiconductor band structure

ABSTRACT: The magnetoresistance and Hall effect were studied for oriented specimens of n-type gallium arsenide with carrier concentrations of 5×10^{15} to $1 \times 10^{18} \text{ cm}^{-3}$ at temperatures of 78 to 800K. Almost all samples showed anisotropy of the transverse magnetoresistance and nonvanishing longitudinal magnetoresistance. The energy position of the minima and effective mass were estimated from the temperature dependence of the Hall coefficient $\Delta W = 0.12$ to

Card 1/2

L 08075-67

ACC NR: AP6033896

0.36 eV, $m_1^* = 1.2 m_0$, $m_2^* = 1.98 m_0$, $m_3^* = 0.37 m_0$. . A model for the band structure in the vicinity of the conduction band edge was discussed, and was shown to be consistent with experimental data when anisotropy of electron scattering by weak oriented dipoles was taken into account. The authors thanked E. V. Skubnevskii for his assistance in measurements. Orig. art. has: 8 figures, 4 tables, and 13 formulas. [Based on authors' abstract]

SUB CODE: 20/ SUBM DATE: 30Mar66/ ORIG REF: 012/ OTH REF: 009/

Card 2/2 *pld*

ACC NR: AP6026304

SOURCE CODE: UR/0288/66/000/001/0078/0086

AUTHOR: Kravchenko, A. F.; Sardaryan, V. S.

ORG: Institute of Semiconductor Physics, Siberian Department, AN SSSR, Novosibirsk
(Institut fiziki poluprovodnikov Sibirskogo Oodeleniya AN SSSR)

TITLE: Influence of impurities on the electron energy spectrum in semiconductors

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya tekhnicheskikh nauk,
no. 1, 1966, 78-86

TOPIC TAGS: electron energy spectrum, semiconductor impurity, electron energy level

ABSTRACT: An analytical expression is derived for the density of electron states in a semiconductor, for energy levels of practical interest, in a form convenient for numerical computation. The analysis is developed for a semiconductor containing (of a single type) distributed uniformly over the crystal. The presence of randomly distributed charged particles gives rise in a semiconductor to an additional electrostatic potential that varies from point to point. The field of the charged impurities is characterized by a screening potential proportional to the potential electron energy

$$v_{i,j}(r) = v(r_i - r_j) = - \frac{e^2}{\epsilon(|r_i - r_j|)} e^{-\frac{|r_i - r_j|}{r_0}} \quad (3)$$

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UDC: 621.315.592

ACC NR: AP6026304

where ϵ is the dielectric constant of the semiconductor, and i and j are the electron and impurity numbers, respectively. Based on this model representation, and using the Thomas-Fermi statistical method, the expression for the density of the electron states in the conduction band is obtained in the form

$$\rho(E) = Q \int_{-\infty}^E \frac{(E - \eta)^{1/2} e^{-\beta \eta}}{(a + \beta \eta + \gamma \eta)^{1/2}} d\eta. \quad (20)$$

An evaluation of this integral for various electron energies leads to a relation between the density of the electron states in the conduction band and the total electron energy. The specific calculations involved in the analysis are given in appendices. The authors are indebted to I. M. Tsidil'kovskiy, V. V. Serebriakov, N. Ye. Tovmasian, and E. M. Skok for valuable discussions. Orig. art. has: 51 formulas and 1 figure.

SUB CODE: 20/ SUBM DATE: 10Jun65/ ORIG REF: 007/ OTH REF: 008

KRAVCHENKO, A.G.

World data centers. Geofiz. biul. no.15:84-89 '65.
(MIRA 18:11)

KRAVOHENKO, A.G.

BARTAK, G.Ye.; KRAVOHENKO, A.G.

Effect of medinal on exchange of sugar between blood and cerebral cortex. Vop. fiziol. no.7:115-124 '54. (MLRA 8:1)

1. Dnepropetrovskiy meditsinskiy institut.

(BARBITURATES, effects,

barbital sodium on sugar exchange between blood & cerebral cortex)

(HEMATOENCEPHALIC BARRIER,

eff. of barbital sodium on sugar exchange between blood & cerebral cortex)

(BLOOD SUGAR,

eff. of barbital sodium on sugar exchange between blood & cerebral cortex)

(CEREBRAL CORTEX, physiology,

eff. of barbital sodium on sugar exchange between blood & cerebral cortex)

137-58-4-7207

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 127 (USSR)

AUTHORS: Fomichev, I. A. , Vdovin, F. V. , Kravchenko, A. G. , Pishchik, N. S.

TITLE: Manufacture of Tubes From Austenitic 1Kh14N14V2M (EI-257)
Steel [Proizvodstvo trub iz austenitnoy stali 1Kh14N14V2M
(EI-257)]

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. n.-i. trubnyy in-t, 1957,
Nr 3, pp 5-16

ABSTRACT: Tubes of 1Kh14N14V2M are designed for use for re-heaters and manifolds of boilers operating under high and superhigh steam parameters. This steel (S) is a S of the austenitic class and is highly heat-resistant. The effects of temperature and degree of reduction on the plasticity of the S were investigated, and experiments were conducted in rolling the tubes on an automatic 400 mill. Forged hollow and solid blanks with machined surfaces were employed. Plasticity was determined by torsion testing, by testing for pierceability, and for tension in a single plane (this last method was employed for the first time and makes it possible to determine the relationship between the temperature and plasticity, under

Card 1/2

137-58-4-7207

Manufacture of Tubes From Austenitic 1Kh14Ni4V2M (EI-257) Steel

conditions of stress similar to those of the real stresses existing during piercing, and, consequently, the optimum temperature for the working of the S). The design of the apparatus for testing for plane tension is appended and described. An analysis of the results of the torsion, plane tension, piercing, and micro-structure tests is presented. This shows that piercing of the blank should best be performed in the 1200-1225°C temperature interval. The results of tests for pierceability and high-temperature torsion show that as the length of time the metal is held for purposes of heating increases the plasticity of the S drops. After obtaining the results of laboratory investigation, rolling of tubes of 219x27 mm dimensions was performed successfully both from hollow and from solid blanks. Solid blanks are recommended as being economically advantageous.

I. M.

1. Steel tubes--Manufacture
2. Steel tubes--Material

Card 2/2

Kravchenko, A. G.

USSR/Miscellaneous

Card 1/1 Pub. 124 - 16/39

Authors : Kravchenko, A. G.

Title : Documents on the nomination of N. K. Krupskaya as honorary member of the Acad. of Sc., USSR

Periodical : Vest. AN SSSR 26/2, 92-94, Feb 1956

Abstract : Announcement is made by the Archives of the Academy of Sc., USSR about the preservation of a special protocol dated February 1, 1930, verifying that N. K. Krupskaya (widow of V. I. Lenin) was made an honorary member of the Academy of Sciences, USSR for her great contributions to the development of the Communist ideology. Eleven USSR references (1933-1940).

Institution :

Submitted :

MOSKETI, K.V. (Arkhangel'sk); BEL'SKAYA, G.M. (Arkhangel'sk);
KRAVCHENKO, A.G. (Arkhangel'sk)

Concerning pyromania. Prak.sudebnopsik.ekspert. no.6:36-40
'62. (MIRA 16:2)
(PYROMANIA)

ACCESSION NR: AR4018328

S/0137/64/000/001/D038/D038

SOURCE: RZh. Metallurgiya, Abs. 1D237

AUTHOR: Pishchikov, G. P.; Kravchenko, A. G.

TITLE: Making boiler pipe of PZ, 12Kh2MFSR, EI756, EI713, EI695R, and EI17 steels

CITED SOURCE: Sb. Proiz-vo trub. Vy*p. 9.M., Metallurgizdat, 1963, 13-18

TOPIC TAGS: pipe rolling, steel pipe, steel pipe manufacture, steel plasticity, steel puncture strength, rolling mill operation

TRANSLATION: Tests for warping were conducted on samples 90 and 250 mm in diameter at temperatures of 1,000-1,275 degrees every 50-25 degrees. The plasticity according to the amount of twists was tested to destruction, and the resistance to deformation was studied according to the intensity of twisting. It was determined that the plasticity of 12Kh2MFSR steel up to 1,270 degrees increases continuously (at 1,000 degrees, the number of twists is 22, at 1,250 degrees, 46), steel PZ changes little (at 1,000, the number of twists equals 20, at 1,100 degrees, 22, and at 1,250 degrees, 20). The intensity of twisting for all steel studied diminished proportionately with the increase in temperature. Thus, for three samples of

Card 1/2

ACCESSION NR: AR4018328

12Kh2MFSR steel 250 mm in diameter, at 1,000 degrees, the intensity was zero; at 1,100 degrees, 6 kg, and at 1,250 degrees, 1.8 kg. In twisting samples of large diameters, the plasticity of the peripheral zones was higher than that of the central zones. For testing for puncture strength, conical samples were used, which made it possible to have a zone of pressing of 0-14.3%. On the basis of the results of tests, schedules for hot rolling of boiler pipes were worked up. Then, pipes measuring 89 x 11 mm were rolled on an automatic "140" installation, and pipes measuring 152 x 25, 168 x 26, and 273 x 36 mm were rolled on an automatic "400" installation. Forged faced samples of solid cross-section were used for rolling. Experimental rolling took place normally. The external surface of the pipes was good. The pipes of PZ steel had minor defects 200 mm on their ends. Pipes of EI713, EP17, and EI695R has minor defects on their internal surfaces. Tables are given of the parameters of piercing and set up of the mill, and also the basic industrial parameters for the manufacture of pipes of the above-mentioned types of steel.

SUB CODE: MM, IE

ENCL: 00

Card 2/2

KRAVCHENKO, A.I.

Periodic fluctuations of the intragastric temperature and the periodic motor function of the empty stomach in true gastric achylia. Vrach.delo no.10:91-95 0 '62. (MIRA 15:10)

1. Fakul'tetskaya terapevticheskaya klinika (zav. - akademik V.N. Ivanov [deceased]) Kiyevskogo meditsinskogo instituta.
(STOMACH--SECRECTIONS) (PERIODICITY)

AUTHOR: Kravchenko, A.I.

SOV/130-58-7-29/35

TITLE: According to Increased Obligations (Po povyshennym
obyazatel'stvam)

PERIODICAL: Metallurg, 1958, Nr 7, p 41 (USSR).

ABSTRACT: The author mentions that the personnel of Nr 1 melting shop at the imeni Andreyeva (imeni Andreyev) Works undertook, in honour of the "Day of the Metallurgist" to revise production plans upwards and that his crew (under Stalin prize-winner Zhukov) fulfilled the 1957 production plan to 102.7%, the corresponding figure for the first quarter of 1958 being 106%. He states that his crew are competing with the crew under I.I.Chursinov at the Pervoural'skiy novotrubnyy Works and that the enthusiasm of workers has risen since the introduction of the seven-hour day.

ASSOCIATION: Zavod imeni Andreyeva (imeni Andreyev Works)

Card 1/1 1. Labor--Performance 2. Labor--USSR 3. Metals--Production

SLUTSKIY, S.S., kand.ekonom.nauk; PILIPCHUK, A.I., nauchnyy sotrudnik;
 ANTONOV, M.F., kand.tekhn.nauk; MALYARCHUK, G.S., kand.tekhn.
 nauk. Prinimali uchastiye: MEL'NIKOV, A.A., inzh.; ARSEN'YEVA,
 A.I., inzh.; TEREKHOVA, Z.S., tekhnik; SIDOROVA, L.N., tekhnik;
 ISSERLIS, I.I., tekhnik; KRAVCHENKO, A.I., inzh. POSTNIKOV,
 S.A., inzh., red.; ZHULIN, V.K., otv. za vypusk; POKHLEBKINA,
 M.I., tekhn.red.

[Efficient distribution of and organization of work at cargo
 transfer points] Ratsional'noe razreshchenie i organizatsiya
 raboty punktov perevalki. Pod obshchey red. S.S.Slutskego.
 Moskva, 1960. 127 p. (MIRA 14:2)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut
 ekonomiki i ekspluatatsii vodnogo transporta. 2. TSentral'nyy
 nauchno-issledovatel'skiy institut ekonomiki i ekspluatatsii
 vodnogo transporta (for Slutskiy, Pilipchuk, Terekhova, Sidorova,
 Isserlis). 3. Institut kompleknykh transportnykh problem AN SSSR
 (for Antonov, Malyarchuk, Kravchenko).
 (Cargo handling)

KRAVCHENKO, A.I.

Use of VTI-8 admixture for stablizing turbine oils. Energetik 9
no.6:9-10 Je '61. (MIRA 16:7)

(Turbines)

(Lubrication and lubricants)

KRAVCHENKO, A.I.

Intracutaneous test by means of an autoserum in Botkin's disease. Vrach. delo no.11:86-90 N°63 (MIRA16:12)

1. Kafedra infektsionnykh bolezney Kiyevskogo meditsinskogo instituta.

KRAVCHENKO, A.I.

Intragastric temperature in various diseases. Vrach. delo
no.10:36-40 0 '63. (MIRA 17:2)

1. Fakul'tetskaya terapevticheskaya klinika (zav. - prof.
G.I. Burchinskiy) Kiyevskogo meditsinskogo instituta.

KRAVCHENKO, A. I.

USER/ Geology - Volcanic action

Card 1/1 Pub. 86 - 31/37

Authors : Karlov, N. N., and Kravchenko, A. I.

Title : New deposits of volcanic ashes at Dnepropetrovsk

Periodical : Priroda 44/4, 118 - 119, Apr 1955

Abstract : A description is given of volcanic ash deposits at Dniepropetrovsk, which, it is believed, floated in the air for long distances before settling at this point. A study of this rather loose material of relatively recent volcanic action makes possible the determination of the time and intensity of volcanic eruptions in the quaternary and tertiary periods. Illustration; drawing.

Institution :

Submitted :

KRAVCHENKO, A. I.

Principal concretionary formations in sands of the Poltavian
stratum. Biul.MOIP. Otd.geol.30 no.4:79-82 J1-Ag'55.
(Geology, Stratigraphic) (Concretions) (MLRA 8:12)

KRAVCHENKO, A.I.

Composition and origin of the sand dunes of the Baltic Sea region.
Izv.Vses.geog.ob-va 87 no.1:68-70 Ja-F '55. (MIRA 8:4)
(Baltic Sea region—Sand dunes)

KARLOV, N.N.; KRAVCHENKO, A.I.

On the composition and the age of certain schizolites from the
Donets Basin. Dokl. AN SSSR 112 no.5:927-929 F '57. (MLBA 10:4)

1. Dnepropetrovskiy inzhenerno-stroitel'nyy institut. Predstavleno
akademikom D.V. Maltvkinym.
(Donets Basin--Pectolite)

KARLOV, N.N.; KRAVCHENKO, A.I.

Contribution of N.I. Dmitriev to the study of the geology
of the Quaternary and the geomorphology of the Ukraine. Biul.
Kom. chetv. per. no.24:138-144 '60. (MIRA 16:7)

(Ukraine—Geology)

KRAVCHENKO, A.I.

Antineoplastic activity of some chlorbutin (or. vari. 1971) isomers.
Farm. 1 Loh. 28 no.6:738-740 N-D '66.

(R.D. 19:1)

1. Laboratoriya eksperimental'noy khimioterapii opukholov
(rukovoditel' - prof. V.A.Chernov) otдела khimioterapii
(rukovoditel' prof. G.N.Perrhin) Vsesoyuznogo nauchno-issledo-
vatel'skogo khimiko-farmatsevticheskogo instituta imeni
Ordzhonikidze, Moskva.

KRAVCHENKO, A.I. (Moskva, Novo-Gireyevo, 16/45, kv. 44)

Measuring the nucleus size of blastomeres and cells at initial stages of development in Triton taeniatus L. Arkh. anat., gist. 1 embr. 47 no. 7:22-29 JI ' 64.

1. Laboratoriya eksperimental'noy khimioterapii opukholay (rukovoditel' - doktor med. nauk V.A. Chernov) Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta imeni Ordzhonikidze, Moskva. Submitted April 4, 1963.

GRIGOR'YEV, Ye.T., inzhener; KRAVCHENKO, A.I., inzhener.

Utilizing trailing weight of type 2-2 electric locomotives. Vest.
TSNII MPS 15 no.2:22-25 S '56. (MIRA 9:12)

1. Novocherkasskiy elektrovostoitel'nyy zavod imeni S.M. Buden-
nogo.

(Electric locomotives)

GRIGOR'YEV, Ye.T., inzh. KRAVCHENKO, A.I., inzh.

Using the adhesion weight of electric locomotives with oblique
traction. Vest. TSNII MPS 17 no.8:23-27 D '58. (MIRA 12:1)

1.Novecherkasskiy elektrovezostreitel'nyy zaved.
(Electric locomotives)

GRIGOR'YEV, Ye.T., inzh.; KRAVCHENKO, A.I., inzh.; NESTEROV, S.D., inzh.

Transverse elastic truck couplers for electric locomotives. Vest.
TSNII MPS 18 no.8:21-25 D '59. (MIRA 13:9)
(Electric locomotives)

KRAVCHENKO, A.I., inzh.

Locomotives with a total utilization of the weight on the driving axles.
Izv.vys.ucheb.zav.; mashinostr. no.3:129-234 '60. (MIRA 14:3)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana.
(Locomotives--Dynamics)

KRAVCHENKO, Aleksandr Ignat'yevich

Study of some structural factors of the H60 electric locomotive.

Izv. vys. ucheb. zav.; elektromekh. 3 no.3:144-157 '60.

(MIRA 13:10)

1. Nachal'nik laboratorii perspektivnykh razrabotok Novocherkasskogo nauchno-issledovatel'skogo instituta elektrozostroyeniya.

(Electric locomotives)

KRAVCHENKO, Aleksandr Ignat'yovich, inzh.

Traction displacements in the carriage of an electric locomotive.
Izv. vys. ucheb. zav.; elektromekh. 3 no.6:112-118 '60. (MIRA 15:5)

1. Nachal'nik laboratorii perspektivnykh razrabotok Novocher-
kasskogo nauchno-issledovatel'skogo instituta elektrovozostroyeniya.
(Electric locomotives)

KRAVCHENKO, A.I., inzh.

Investigating the horizontal static interaction of a locomotive and track on curves. Izv.vys.ucheb.zav.; mashinostr. no.7:142-148 '60.
(MIRA 13:11)

1. Novocherkasskiy elektrovostoitil'nyy zavod.
(Locomotives—Performance)

KRAVCHENKO, A.I.; SITNIK, N.Kh.

Ways of creating main-line electric locomotives on the basis
of dimensional series and standardization. Sbor. nauch. trud.
EINII 2:72-93 '62. (MIRA 16:8)

(Electric locomotives--Design and construction)

KRAVCHENKO, Aleksandr Ignat'yevich, inzh.; BRATOLYUBOV, Vsevolod,
Borisovich, inzh.

Integral method for evaluating electric traction motors. Izv.
vys.ucheb.zav.; elektromekh. 6 no.2:229-236 '63. (MIRA 16:4)

1. Nachal'nik laboratorii perspektivnykh razrabotok
Novocherkasskogo nauchno-issledovatel'skogo instituta
elektrovozostroyeniya (for Kravchenko). 2. Nachal'nik otдела
Mordovskogo nauchno-issledovatel'skogo elektrotekhnicheskogo
instituta (for Bratolyubov).

(Electric locomotives) (Electric railway motors)

DOROSHUK, G.P.; KRAVCHENKO, A.I.

Static problems concerning the motion of a 2-2-2 electric locomotive in curves and their calculation using the "Ural-1" digital computer. Sbor. nauch. trud. Elnii 3:171-191 '63.

(MIRA 17:4)

DOROSHUK, Georgiy Panteleyevich, mladshiy nauchnyy sotrudnik;
KRAVCHENKO, Aleksandr Ignat'yevich, inzh.

Reliability of systems with given statistical characteristics
of their quality and applications. Izv. vys. ucheb. zav.; elektro-
mekh. 8 no.4:367-377 '65. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstrukterskiy
institut elektrovozostroyeniya (for Doroshuk). 2. Nachal'nik labo-
ratorii perspektivnykh razrabotok Vsesoyuznogo nauchno-issledovatel'-
skogo i proyektno-konstrukterskogo instituta elektrovozostroyeniya
(for Kravchenko).

KRAVCHENKO, Aleksandr Ignat'yevich, inzh.; KRAVCHENKO, Marina Ignat'yevna,
ordinator

Use of a digital computer in solving a problem on the cognition
of a logical image described by discrete information. Izv. vys.
ucheb. zav.; elektromekh. 8 no.4:472-473 '65. (MIRA 18:5)

1. Nachal'nik laboratorii perspektivnykh razrabotok Vsesoyuznogo
nauchno-issledovatel'skogo i proyektno-konstruktorskogo instituta
elektrovozostroyeniya (for Kravchenko, A.I.). 2. Klinika nervnykh
bolezney i neyrokhirurgii Rostovskogo meditsinskogo instituta (for
Kravchenko, M.I.).